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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
LEE, ANDREW CHUNG CHEUNG	
ART UNIT	**PAPER NUMBER**
2664	

DATE MAILED: 03/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/893,763	PODAR ET AL.	
	Examiner	Art Unit	
	Andrew C Lee	2664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 June 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *37* is/are allowed.

6)☒ Claim(s) *1-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *7/17/2001*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: page 11, lines 22, the reference element "Memory 28"; line 23, the reference element "access router 20"; page 12, line 5, the reference element "access router 18", line 11, the reference element "user device 2". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities:

- Page 11, line 22, the element "Memory 28", "28" is a typo. It should be corrected as "Memory 38".
- Page 11, line 23, the element "access router 20", "20" is a typo, It should be corrected as "access router 30".

- Page 12, line 5, the element "access router 18", "router" is a typo. It should be corrected as "access network 18".
- Page 12, line 11, the element "user device 2", "2" is a typo. It should be corrected as "user device 20".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1 – 7, 9, 12, 17 – 18, 20 – 25, 30, 35 – 36, are rejected under 35 U.S.C. 103(a) as being unpatentable over Leung et al. (U.S. Patent No. 6765892 B1) in view of Sipple et al. (U.S. Patent No. 6405327 B1).

Regarding claims 1, 9, Leung et al. discloses the limitation of a system for managing access to IP multicast traffic (Abstract, lines 1 – 8), comprising: a join request manager within an access router (Fig.3, element 309; column 2, lines 54 – 58), the access router comprising a central processing unit (CPU) (Fig. 9, element 1163, column 12, line 30), and a memory unit (Fig. 9, element 1162, column 12, line 31), and operable to replicate multicast traffic flows for communication to one or more user devices within

user systems coupled to the access router using a link (Fig. 3, Abstract, lines 18 – 21), the join request manager operable to: receive a request to receive a multicast traffic flow, the request being received from one of the user devices within one of the user systems (column 5, lines 57 – 64); and Leung et al. does not disclose expressly denying the request if a system metric is above a threshold. Sipple et al. discloses the limitation of denying the request if a system metric is above a threshold (column 7, lines 5 – 10). It would have been obvious to modify Leung et al. to include denying the request if a system metric is above a threshold such as that taught by Sipple et al. in order to provide resource efficient means for monitoring the performance of various portions of a multicast system.

Regarding claims 2, 20, Leung et al. discloses the limitation of a system for managing access to IP multicast traffic (Abstract, lines 1 – 8), Leung et al. does not disclose expressly the system of claimed wherein the system metric is the utilization of the CPU. Sipple et al. discloses the limitation of the system of claimed wherein the system metric is the utilization of the CPU (Fig. 6, element 1110, column 2, lines 19 – 26). It would have been obvious to modify Leung et al. to include the system of claimed wherein the system metric is the utilization of the CPU such as that taught by Sipple et al. in order to provide resource efficient means for monitoring the performance of various portions of a multicast system.

Regarding claims 3, 21, Leung et al. discloses the limitation of a system for managing access to IP multicast traffic (Abstract, lines 1 – 8). Leung et al. does not disclose expressly the system of claimed wherein the utilization of the CPU is measured in terms of a percentage of a maximum processing capacity of the CPU. Sipple et al. discloses the limitation of the system of claimed wherein the utilization of the CPU is measured in terms of a percentage of a maximum processing capacity of the CPU (column 3, lines 20 – 25; column 6, 19 – 29). It would have been obvious to modify Leung et al. to include the system of claimed wherein the utilization of the CPU is measured in terms of a percentage of a maximum processing capacity of the CPU such as that taught by Sipple et al. in order to provide resource efficient means for monitoring the performance of various portions of a multicast system.

Regarding claims 4, 22, Leung et al. discloses the limitation of a system for managing access to IP multicast traffic (Abstract, lines 1 – 8). Leung et al. does not disclose expressly the system of claimed wherein utilization of the CPU above the threshold impairs operation of the access router. Sipple et al. discloses the limitation of the system of claimed wherein utilization of the CPU above the threshold impairs operation of the processing system (column 6, lines 19 – 29). It would have been obvious to modify Leung et al. to include the system of claimed wherein utilization of the CPU above the threshold impairs operation of the access router such as that taught by Sipple et al. in order to provide resource efficient means for monitoring the performance of various portions of a multicast system.

Regarding claims 5, 23, Leung et al. discloses the limitation of a system for managing access to IP multicast traffic (Abstract, lines 1 – 8). Leung et al. does not disclose expressly the system of claimed wherein the system metric is the usage of the memory unit. Sipple et al. discloses the limitation of the system of claimed wherein the system metric is the usage of the memory unit (Fig. 6, element 1106, column 7, lines 38 – 48). It would have been obvious to modify Leung et al. to include the system of claimed wherein the system metric is the usage of the memory unit such as that taught by Sipple et al. in order to provide resource efficient means for monitoring the performance of various portions of a multicast system.

Regarding claims 6, 24, Leung et al. discloses the limitation of a system for managing access to IP multicast traffic (Abstract, lines 1 – 8). Leung et al. does not disclose expressly the system of claimed wherein the usage of the memory unit is measured in terms of a percentage of a maximum storage capacity of the memory unit. Sipple et al. discloses the limitation of the system of claimed wherein the usage of the memory unit is measured in terms of a percentage of a maximum storage capacity of the memory unit (Fig. 6, element 1106, column 7, lines 38 – 48). It would have been obvious to modify Leung et al. to include the system of claimed wherein the usage of the memory unit is measured in terms of a percentage of a maximum storage capacity of the memory unit such as that taught by Sipple et al. in order to provide resource

efficient means for monitoring the performance of various portions of a multicast system.

Regarding claims 7, 25, Leung et al. discloses the limitation of a system for managing access to IP multicast traffic (Abstract, lines 1 – 8). Leung et al. does not disclose expressly the system of claimed wherein usage of the memory unit above the threshold impairs operation of the access router. Sipple et al. discloses the limitation of the system of claimed wherein usage of the memory unit above the threshold impairs operation of the processing system (column 6, lines 59 – 60; column 7, lines 5 – 10). It would have been obvious to modify Leung et al. to include the system of claimed wherein usage of the memory unit above the threshold impairs operation of the access router such as that taught by Sipple et al. in order to provide resource efficient means for monitoring the performance of various portions of a multicast system.

Regarding claims 12, 30, Leung et al. discloses the limitation of the system of Claimed wherein the system metric is an aggregate multicast bandwidth over a link coupling, the user system to the access router (Fig. 3, column 5, lines 57 – 64) .

Regarding claims 17, 35, Leung et al. discloses the limitation of the system of claimed wherein the request is an Internet group management protocol (IGMP) join request (column 2, lines 54 – 61).

Regarding claims 18, 36, Leung et al. discloses the limitation of the system of claimed wherein the join request manager denies the request by dropping one or more packets containing the request (column 7, lines 3 – 8).

5. Claims 8 – 11, 13 –16, 26 – 29, 31 – 34, are rejected under 35 U.S.C. 103(a) as being unpatentable over Leung et al. (U.S. Patent No. 6765892 B1) and Sipple et al. (U.S. Patent No. 6405327 B1) as applied to claims 1 – 7, 9, 17 – 18, 20 – 25, 35 – 36 above, and further in view of Eyuboglu et al. (U.S. Patent No. 6781999 B2).

Regarding claims 8, 26, both Leung et al. and Sipple et al. do not disclose expressly the system of claimed wherein the system metric is an aggregate multicast bandwidth output of the access router. Eyuboglu et al. discloses the limitation of the system of claimed wherein the system metric is an aggregate multicast bandwidth output of the access router (Abstract, lines 3 – 7; Fig. 2, element 22, column 5, lines 46 – 53). It would have been obvious to modify both Leung et al. and Sipple et al to include a system of claimed wherein the system metric is an aggregate multicast bandwidth output of the access router such as that taught by Eyuboglu et al. in order to provide an efficient way of delivering the same content to multiple users by transmitting only one copy.

Regarding claims 9, 27, both Leung et al. and Sipple et al. do not disclose expressly the system of claimed wherein the threshold is equal to a maximum

aggregate multicast bandwidth output of the access router minus a bandwidth output required to deliver the multicast traffic flow to the user device. Eyuboglu et al. discloses the limitation of the system of claimed wherein the threshold is equal to a maximum aggregate multicast bandwidth output of the access router minus a bandwidth output required to deliver the multicast traffic flow to the user device (column 12, lines 62 – 67). It would have been obvious to modify both Leung et al. and Sipple et al to include a the system of claimed wherein the threshold is equal to a maximum aggregate multicast bandwidth output of the access router minus a bandwidth output required to deliver the multicast traffic flow to the user device such as that taught by Eyuboglu et al. in order to provide an efficient way of delivering the same content to multiple users by transmitting only one copy.

Regarding claims 10, 13, 14, 28, 31, 32, both Leung et al. and Sipple et al. do not disclose expressly the system of claimed wherein the maximum aggregate multicast bandwidth output of the access router is equal to a maximum aggregate bandwidth output minus an aggregate bandwidth output reserved for unicast traffic. Eyuboglu et al. discloses the limitation of the system of claimed wherein the maximum aggregate multicast bandwidth output of the access router is equal to a maximum aggregate bandwidth output minus an aggregate bandwidth output reserved for unicast traffic, (column 9, lines 66 – 67; column 10, lines 1 – 10). It would have been obvious to modify both Leung et al. and Sipple et al to include the system of claimed wherein the maximum aggregate multicast bandwidth output of the access router is equal to a

maximum aggregate bandwidth output minus an aggregate bandwidth output reserved for unicast traffic such as that taught by Eyuboglu et al. in order to provide an efficient way of delivering the same content to multiple users by transmitting only one copy.

Regarding claims 11, 15, 16, 29, 33, 34, both Leung et al. and Sipple et al. do not disclose expressly the system of claimed wherein the join request manager determines the bandwidth output required to deliver the multicast traffic flow to the user device by accessing a channel profile corresponding to the multicast traffic flow contain ed in an authentication, authorization, and accounting (AAA) server. Eyuboglu et al. discloses the limitation of expressly the system of claimed wherein the join request manager determines the bandwidth output required to deliver the multicast traffic flow to the user device by accessing a channel profile corresponding to the multicast traffic flow contain ed in an authentication, authorization, and accounting (AAA) server (column 12, lines 54 – 57). It would have been obvious to modify both Leung et al. and Sipple et al to include the system of claimed wherein the join request manager determines the bandwidth output required to deliver the multicast traffic flow to the user device by accessing a channel profile corresponding to the multicast traffic flow contain ed in an authentication, authorization, and accounting (AAA) server such as that taught by Eyuboglu et al. in order to provide an efficient way of delivering the same content to multiple users by transmitting only one copy.

Allowable Subject Matter

6. Claim 37 is allowed.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C. Lee whose telephone number is (571) 272-3131. The examiner can normally be reached on Monday through Friday from 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on (571) 272-3134. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ajit Patel
Primary Examiner

ACL AU:2664 10 March 2005